

From glowbugs@theporch.com Thu Mar 21 19:53:02 1996  
Return-Path: glowbugs@theporch.com  
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com  
(8.7.5/AUX-3.1.1) with SMTP id TAA15554; Thu, 21 Mar 1996 19:43:32 -0600 (CST)  
Date: Thu, 21 Mar 1996 19:43:32 -0600 (CST)  
Message-Id: <199603220143.TAA15554@uro.theporch.com>  
Errors-To: ws4s@midtenn.net  
Reply-To: glowbugs@theporch.com  
Originator: glowbugs@theporch.com  
Sender: glowbugs@theporch.com  
Precedence: bulk  
From: glowbugs@theporch.com  
To: Multiple recipients of list <glowbugs@theporch.com>  
Subject: GLOWBUGS digest 137  
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas  
X-Comment: Please send list server requests to listproc@theporch.com  
Status: 0

#### GLOWBUGS Digest 137

Topics covered in this issue include:

- 1) Inside the Russian Tube Industry  
by MAB@delphi.com
- 2) Tube Testing and Transconductance  
by "Barry L. Ornitz" <u856010@eastman.com>
- 3) Re: Glowbuggite/Boatanchorite 3579.545 funzies  
by rdkeys@csemail.cropsci.ncsu.edu
- 4) Re: Glowbuggite/Boatanchorite 3579.545 funzies  
by rdkeys@csemail.cropsci.ncsu.edu
- 5) Re: ....funzies  
by rdkeys@csemail.cropsci.ncsu.edu
- 6) 1937 edt. of amateur radiotelephony...sold  
by robert fowle <hammarlund@voyager.net>
- 7) FCC rules on the Web (Was Funzies)  
by "Dennis L. Wade" <dwade@arb.ca.gov>

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Date: Wed, 20 Mar 1996 22:23:41 -0500 (EST)  
From: MAB@delphi.com  
To: glowbugs@theporch.com  
Subject: Inside the Russian Tube Industry  
Message-ID: <01I2KT1RPF0Y99I4QV@delphi.com>

As an afterthought to my post about Western Electric tubes back in production in the States, I should mention that Volume 6, Number 4



is possible to measure the transconductance of the screen and other grids of a tube too. Since low frequency AC signals are used, capacitive effects on the transconductance are generally ignored. [My Hickoks measure at 60 Hz; I have a manual for a Heath that measures at 5 kHz.]

Probably the best test of a tube, other than by direct substitution in the circuit in which it is used, is the power output method. In this case, the tube is biased for normal operation and an AC grid voltage is applied to simulate the normal drive level. Power output into a load is then measured. This power level is indicative of the overall performance of the tube - a combination of emission and gain. This particular test is excellent for testing audio output tubes. Distortion might also be measured if this is a critical parameter. Doing this test at radio frequencies, however, is difficult so with RF power tubes substitution is still the best test.

Curve tracers are very useful for illustrating the nonlinear characteristics of tubes which is the reason that many universities bought them. Other than their use to a tube designer (someone who designs tubes themselves, not tube-based circuits), virtually no one else had a use for them. The characteristics of a particular tube are generally very tightly controlled. These basic characteristics are published and they do not normally change much as the tube ages (although gain does drop off with decreased emission and loss of vacuum causes other problems). Early solid-state devices, on the other hand, showed considerable spread in their characteristics so transistor curve tracers are much more popular. [I think a 5% decrease in transconductance may classify a tube as suspect, but early transistors as manufactured could show as much as a 2000% variability in their current gain!]

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

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Date: Thu, 21 Mar 1996 12:31:19 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: 70401.134@compuserve.com (Sandy Blaize)  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com,  
Subject: Re: Glowbuggite/Boatanchorite 3579.545 funzies  
Message-ID: <9603211731.AA103996@csemail.cropsci.ncsu.edu>

There were a bunch of fellers on last night for the continuing saga of the woebegone, forlorn, erstwhile lost glow-in-the-dark rigs of normal and homebuilt timbre on the fine QRG of 3579.545 at 0300/0400/0500/0600Z. More of the crew should fires up their bottleburners and join in on the fun. After all, why have such ancient monsters around, if they don't puff and smoke and spark and generally burn a hole or two in the ether, in the wee small hours.....(:+}}.....

Last night had everything from a modern rig (his bottleburner was not up to it last night), to the venerable Viking, Ranger, TCS-13, and Big Bertha Radiomarine, to a fine breadboard puffer using a 6A6 MOPA circuit, self-oscillatory or tv rox ringing. All were in fine form, and well heard across the ether.

So, join in if you can, and keep yer filaments warm, and yer bottles stoked, fer some fine rattle 'n banging on the ol brass monkey.

> Bob,  
> Well....how did the 6A6 rig do as an MOPA last nite?

Sounded great MO or XTAL. XTAL was more stable, but MO was not at all bad.

> Plugged grid coil in xtal socket making the oscillator a Push-pull  
> TPTG oscillator driving the push-pull/parallel 6A6 final. It ran  
> about 350v. @ 50 ma. input. (17.5 watts?)

17.5 watts makes for a fine puffer at 1000 miles distant.

> I found my "article" on the oscillator using a single 860  
> tetrode. I may eventually build this beast. It would probably thump  
> out a distinctive signal!

Would that be Dow's classic article from about 1933 QST? Good reading for anyone thinking about electron coupled oscillators (Dow used a 75 watt tube for his, and likewise did the Navy in their big rigs such as TBK).

> Looks like the group is starting to gather. Haven't had 4-5  
> station CW round-tables in YEARS!

I am hoping the round-table format will work out. It is not sufficiently extreme to require a net control type, so the round table seems to work well. I am not font of nets, and it has been 15 years since I have run one, so my netetiquette is probably quite rusty.

> I've noticed that here about 0430-0500 until about 0600-0630  
> or so 75/80 meters seems to go "bonkers" for a while. The skip lengthens  
> out and the QSB/flutter sets in, then, magically, a little past midnite,  
> things stabilize again. Weird!

That is the skip heading west across the continent. It can be used to advantage in determining where you want to work, but will put some folks in rf sinkholes for a while. But, everyone was a solid 559 or better, even with W1AW nearby (no sweat to the regenerator, it just clips it out) and the TV buzz was not much, so all, in all, it was a good working QRG for the bottleburners, and TV rocks are cheap and easy to find.

I had three receivers going for comparisons --- the venerable regenerator RAL, a NC-100A, and an R-388. The RAL was by far the best for operating. The R-388 was more sensitive, but not any better at filtering (the basic IF was too broad, and the xtal filter still did not drop everything out as well as the RAL did). The NC-100A was sensitive, but way too broad in tuning to be usable except in a pinch. It did have great audio quality tho, much better than the R-388 even, but the bandwidth was the pits --- way too wide, with only 3 if cans. Although the RAL suffers from static crashes more than anything else, it still is a razor tuner, compared to almost anything else, if you get used to its null dial calibration.....(:+{}.....

> The strangest propagation I ever witnessed, was near or on the  
> equator in the Amazon area. We had about a 400 mile path from offshore  
> near Amapa to Belem, Brasil. 12 Mhz would open for about an hour in the  
> afternoon. 8 Mhz was sketchy sometimes 4 mhz at night. WOM in Miami  
> roared in on 8 mhz for a couple of hours around 8 PM-10 PM  
> Belem time (GMT -3 hours I think). Static levels very high. The damned  
> barograph made a 'sine wave' recording, almost exactly the same pressure  
> changes every day. Onshore in Belem, you could set your watch by the  
> afternoon showers!

Well, when I monitor the 4/6/8 mhz bcsts and tfc lists for background music, I notice the same thing. WCC on 6 mhz will be QSA 5 and on 8 mhz it will be QSA 3 and then a little later the reverse. FYI, any folks wanting to monitor good mill copy wx/px bcsts, we have lost WLO to modernity, and the only wx/px comes from WCC and WNU that I can hear and that is irregular. I will always be missing those snappy precise 31wpm mill copy runs of the tfc lists and wx from Mobile, every hour on the hour, 24 hours a day..... WCC runs a wx bcst at noon daily, and WNU at about an hour earlier, but the only press run seems to be on WCC on sunday after the wx. I still love to listen to the background mill copy on a good snappy wx bcst whilst puttering around the shack. They are always loud enough even to use as an alignment source for particular bands.

> 73,  
> Sandy W5TVW

73/ZUT Sandy and the other fellers aboard for the watch. It is great fun, and gives us all a chance to stoke up the bottleburners an' plys we the ethers fer a fine watch aboard the crackle an' din o' 200 metres an' down.

DE NA4G/Bob UP

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Date: Thu, 21 Mar 1996 14:01:36 -0500 (EST)

From: rdkeys@csemail.cropsci.ncsu.edu  
To: morgan@speckle.ncsl.nist.gov (Roy Morgan)  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), boatanchors@theporch.com,  
Subject: Re: Glowbuggite/Boatanchorite 3579.545 funzies  
Message-ID: <9603211901.AA104094@csemail.cropsci.ncsu.edu>

> >Well, when I monitor the 4/6/8 mhz bcsts and tfc lists for background music,  
> >WCC runs a wx bcst at noon daily, and WNU at about an hour earlier, but  
> >the only press run seems to be on WCC on sunday after the wx.

Since WLO left us, the only run I have from memory is WCC daily at 1700UTC with the WX from the National Weather Service (High Seas, Offshore, Caribbean, Gulf). QRG 6376/8630/13xxx/16xxx. From where I am 6376 and 8630 are the best. The American Radio Association Free Press (a shipboard radio officers union newspaper) follows Sunday at 1800UTC.

I have WNU and KFS skeds at home, but don't remember them right off. WNU is about an hour before WCC, but I don't have the QRG on the top of the ol greymatters. I found WNU's sked accidentally, while playing with the NC-100 trying to get it up and running. I will sorely miss WLO's every hour on the hour 24 hours a day skeds. Oh, well, so much for progress.

> SRI to have to ask, but can you tell me the frequencies for these guys?  
>  
> Maybe a short summary of frequencies/times for those of us who haven't plied  
> the ethers in such a manner as you-all.

The frequencies are in Title 47 CFR80, in a huge table, but each station usually broadcasts its schedule a time or two daily. Cruise 4100-4600, 6100-6600, 8200-8700, 12500-13500, 16000-17000, and 22000-23000khz. It is a great way to check, quickly, any boatanchor receiver, since most of these stations run at least 1.5kw and many 10kw.

> Thanks.  
> (I'm gonna drag out the RAL on Saturday and see what it'll do!)

Hey..... GoForIt!

DE NA4G/Bob UP

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Date: Thu, 21 Mar 1996 15:02:37 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
To: dmccrar@a553ca.orn.usace.army.mil (Dalton McCrary)  
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com,  
Subject: Re: ....funzies

Message-ID: <9603212002.AA104204@csemail.cropsci.ncsu.edu>

> Bob,  
> You speak of 'Tytle 47 CFR80'. Just what is this publication?

This is the FCC Rules and Regulations. Part 15 is unlicensed operation. Part 97 is amateur operations. Part 80 is commercial shipboard radio operations. There are tables of frequency authorizations and modes in the various sections, as well as detailed rules of operations, testing, licensing, etc. The tables of frequencies are an excellent source of what goes on where in the HF bands.

> Could it be found over the web?

Don't think so. But any good library worth its salt has a set in the government docs section.

> 73, Dalton  
> N40YS

73/ZUT DE NA4G/Bob UP

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Date: Thu, 21 Mar 1996 15:33:04 -0500 (EST)  
From: robert fowle <hammarlund@voyager.net>  
To: glowbugs@theporch.com  
Subject: 1937 edt. of amateur radiotelephony...sold  
Message-ID: <199603212033.PAA12807@vixa.voyager.net>

the book is gone..

=====] -[->

Robert Fowle  
The HAMMARLUND Historian  
Ph. voice or fax 517-789-6721  
1215 Winifred  
Jackson, Mich. 49202-1946  
E-mail at: hammarlund@vixa.voyager.net  
HAMMARLUND LITERATURE WANTED

=====] -[->

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Date: Thu, 21 Mar 1996 15:50:56 +0000  
From: "Dennis L. Wade" <dwade@arb.ca.gov>

To: glowbugs@theporch.com  
Subject: FCC rules on the Web (Was Funzies)  
Message-ID: <199603220007.SAA03619@uro.theporch.com>

Cornell has an experimental server loaded with the entire Code of Federal Regulations, including of course the Amateur Service Rules, all of which is searchable. Point your browser to:

<http://www.law.cornell.edu/regs.html>

Have fun!

Dennis  
KG6ZI

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End of GLOWBUGS Digest 137  
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